

Hands-On Marketing - Business Uses for GIS

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1. Introduction

Many marketing executives must confront the difficulties in converting business objectives set by the organization into actual effective targeted marketing activities on a daily basis. Often, they tend to design marketing activities based on gut feelings, while some rely on various analytical tools. But even using the best analytical techniques available, not many marketing executives are able to decipher the statistical data and convert it into operational decisions. Even fewer are able to identify this as lack of information relating to the market environment.

Based on the market environment, factors such as customer distribution and movement in space, distances between objects on the map and influences of the organization's representations in the field, become an additional and important instrument for the marketing manager, assisting in making optimal decisions prior to launching a marketing campaign.

2. What Is GIS -Geographic Information System ?

Basically, any business entity in the organization's database which may have any sort of geographic link (e.g.: address, city, zip code, state, coordinates, X,Y, etc.), is available for mapping. With mapping, any information about said business entity is analyzable in two other dimensions: time and place. Even today we know that about 80% of the information registered in the organization's database is available for mapping and surrounding environmental analysis.

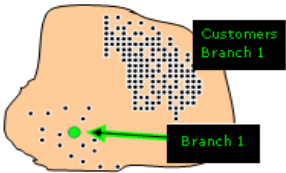
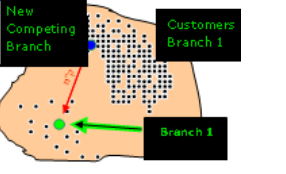
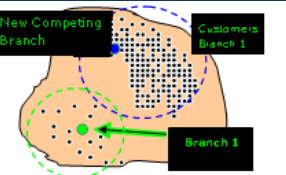
GIS technology, on the one hand, is capable of performing the mapping process for all business entities (organization customers, branches, service centers etc.), by using its internal tools and standard background maps imported into the GIS from difference sources. On the other hand, GIS is also capable of performing advanced analysis by combining the customer data registered in the organization's database, with data imported into the system from different sources.

3. Business Uses for GIS

In this space, there are several phenomena which may affect our business considerations, and which are not inferable based on analytical analysis presented by charts or graphs. Moreover, the results of a GIS analysis may be used as additional predicting parameters for various analytical models.

A visual representation of these phenomena enables the marketer to identify his strengths and weaknesses in the space, and adapt his activities to a geographical area where it will operate, in order to achieve each of the business objectives:

- Acquisition
- Expanding usage
- Retention and churn prevention

The Geographical Phenomenon	Example of a Business Use
Location and distribution (density and scarcity)	 <p>Sale – a high penetration rate of product X in a certain area can attest to high potential for selling said product to customers in that area who do not have it.</p>
Distance / proximity relation (between business entities)	 <p>Retention – locating a large share of customers who reside far from any of the organization's branches offices but near one of the competitor's branches may attest to a high potential for churn (a predicting parameter of a churn model).</p>
Container-contained relations (areas of living and influence)	 <p>Acquisition – by mapping areas of influence of the organization's and its competitors' branches, potential areas for customer acquisition may be detected. The marketing vocabulary used to acquire these potential customers will be based on the information registered by the organization about its existing residing in the same area.</p>

4. Case Study

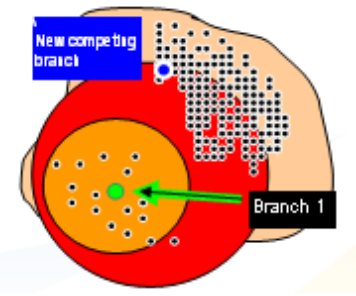
Recently, Synergy has spearheaded a project with the objective of constructing a marketing work plan based on GIS analysis for one of the largest banks in Israel. The outcome of the project submitted to the bank was a marketing work plan detailing the relevant activities for each geographical area, based on said analysis.

The Business Dilemma

One of the business dilemmas which occurred during the analysis was a significant customer churn in one of the bank's regions. After a more comprehensive analysis it appeared that only a few cities in that region suffered acutely from this phenomenon, and that in order to identify the cause of the problem and plan optimal forms of action, an environmental data must be used.

The Process (Summary)

The initial mapping process included all the relevant business entities available for analysis, and combined data, internal and external, to the organization. According to preliminary analytical analysis performed within the organization, combined with the geographical data we indicated circles around the branch, simulating the areas of influence:



- The first circle was in 1 km radius of the branch
- The second circle was in 3 km radius of the branch
- The space beyond the 3 km radius was defined as an area in which the branch's influence on the customer residents is insignificant.

Call for Action

- All customers residing within the first circle, which were found to have a relatively low potential of churn (according to the churn model), will be targeted with proactive retention activities, and it was decided that no costly retention initiatives will be targeted towards them.
- Customers residing within the second circles (i.e. 1-3 km from the branch), will be approached by targeted phone calls made from a customer retention center. Additional geographical data which supported this decision was the fact that the number and density of customers in this circle is particularly high, and a new competing branch was built in their proximity.
- Customers residing outside both circles (i.e. over 3km from the branch) will not be targeted at all, regardless of their churn potential in the churn model. The fact that their number and scarcity renders retention efforts redundant supported this recommendation.

Activity Results

- Targeted retention efforts focused on the most relevant customers, so that on the one hand high communication costs were kept to a minimum, and on the other hand more financial resources were invested in the actual retention tools, a fact which produced a higher than expected cost-effectiveness ratio.
- Adapting the marketing activities and vocabulary to the customers' characteristics and type in the region, has significantly enhanced the response ratio.

5. Conclusion

In the past few years, GIS technology has been permeating from the engineering realm into the business one, and has taken a prominent position among other organizational BI tools. It enables enrichment of the organization's business knowledge about its customers, and improves decision making processes made prior to a marketing campaign launch.

The guidelines of business usage of GIS are that each person has his/her own needs and desires. The space is constructed of many homogeneous units, each including people with similar needs and desires, dissimilar to those of people included in other units. For this reason, a marketing campaign targeting a group of customers in a certain area of the space will not necessarily apply to customers in another area, despite the fact that they are both responding to the same business objective.

About Synergy

Synergy is a consulting company specializing in information based customer management, assisting organizations to maximize the business potential of their end customers, while providing them with tools of improving their marketing, service and retention activities.

Synergy's solutions revolve around customer management, and include Analytical CRM, Operational CRM, Loyalty and Web solutions, as well as Marketing Resource Management solutions.

Synergy Advanced Analytics Division perfects the business consulting services of **Synergy**, and adds another layer of insights and analytical tools to support the company's already thriving activities. Synergy Advanced Analytics' analytical solutions and services encompass innovative data mining techniques, allowing organizations to better understand their customers, actively prevent churn, establish an appropriate pricing policy, cut down on resource utilization and costs, and better deal with the ever changing market.

Synergy was established in 2003 and operates from Israel, the UK and Poland, working with local and international organizations. Among our customers are the foremost industry leaders in the Israeli and international markets, in industries such as communications, finance and retail, among which are banks, credit card companies, insurance companies, mobile operators, internet service providers, international call providers and television networks, as well as large membership clubs in the food, fashion and aviation industries.

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